Frequency & Duration of Flight Guidelines

- Flight Crew duty day maximum = 14 hours
- Rest period minimum = 12 hours
- Maximum flight hours in 7 days = 40 hours (three 11 hour flights is okay)
- Maximum flight crew member hours in 30 day period = 100 hrs
- Must schedule a down day within each 10 day (flight days + no fly days) period
- Flight day = any day aircraft flies or maintenance crews complete preflight
- No fly day = aircraft made available to experimenters but does not fly
- Down day = no activity or support at aircraft

- Typical flight day
  - T/O - 2.0 hrs = aircraft powered and available (1.5 hours minimum)
  - T/O - 1.5 hrs = preflight brief
  - T/O - 0.5 hrs = door closure
  - T/O + 0.0 hrs = takeoff
  - T/O + xx hrs = mission hours
  - T/O + 1.0 hrs = post flight

Flight Operations Costs & Budget

- Assumptions:
  - 150 science hour flights
  - 44 day deployment period
  - ESPO budget to pay for ground services (AGE, towing, lav servicing)
  - Baseline budget $1.8M + $0.4M in reserves = $2.2M

- Option 1 – dual crew support during entire deployment
  - Cost = $2.17M
  - Allows additional ~ 4 flight hours
  - Not practical from staffing perspective

- Option 2 – duel crew for 15 days of deployment
  - Cost = $2.08M
  - Allows additional ~18 flight hours
  - Practical

- Option 3 – single crew for entire deployment
  - Cost = $2.00M
  - Allows additional ~30 flight hours
  - Practical

- Savings of deleting 7 days of deployment
  - Savings = $90k
  - Allows additional ~ 13 flight hours

IceBridge DC-8 Schedule
October/November 2009 (15 Day Dual Crew)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28 Northrop Test Systems Deintegration	29	30	Tech Brief for IceBridge Deployment	2	3
	MCoRDS & Ku Band Radar Antenna, Gravitometer Inst., LVIS Inst. IceBridge DC-8 Instruments Integration					
4	5 Weight + Balance	IceBridge ORR Power check Aircraft Preflight	Safety Brief Shakedown Flight	8	9	10 DC-8 Pack
	MCoRDS & Ku Band Radar Antenna, Gravitometer Inst., LVIS Inst. IceBridge DC-8 Instruments Integration		IceBridge Instruments Suite Assessments Flights			
11	Columbus Day Early AM Departure for Santiago, Chile 11 hr transit time	13 Continue to Punta Arenas, Chile 2.5 hr transit time	14	15 1st Science Flight 11 hr (0800-1900)	16 2nd Science Flight 11 hr (1000-2100)	17
	IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)					
18 3rd Science Flight 11 hr (0800-1900)	19 4th Science Flight 11 hr (1000-2100)	20	21 Down Day	22 5th Science Flight 11 hr (0800-1900)	23	24
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)						
25 6th Science Flight 11 hr (0800-1900)	26 7th Science Flight 11 hr (1000-2100)	27	28 8th Science Flight 11 hr (0800-1900)	29 9th Science Flight 11 hr (0800-1900)	30 10th Science Flight 11 hr (0800-1900)	31 Down Day
IceBridge DC-8 deployment to Punta Arenas, Chile			IceBridge DC-8 deployment to Punta Arenas, Chile (duel crew)			
1 11th Science Flight 11 hr (0800-1900)	2	3 12th Science Flight 11 hr (0800-1900)	4 13th Science Flight 11 hr (0800-1900)	5	6 14th Science Flight 11 hr (0800-1900)	7
IceBridge DC-8 deployment to Punta Arenas, Chile (dual crew)						
8	9	10 Down Day	11	12	13	14
IceBridge DC-8 deployment to Punta Arenas, Chile (dual crew)				IceBridge DC-8 deployment to Punta Arenas, Chile (single		
15	16	17	18	19	20	21
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)						
22 DC-8 Pack	23 Departure for Santiago, Chile	24 Transit to LAX/Palmdale	25	26	27	28
29	30	1	2	3	4	5

IceBridge DC-8 Schedule
October/November 2009 (Single Crew)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28 Northrop Test Systems Deintegration	29	30	Tech Brief for IceBridge Deployment	2	3
	MCoRDS & Ku Band Radar Antenna, Gravitometer Inst., LVIS Inst. IceBridge DC-8 Instruments Integration					
4	5 Weight + Balance	IceBridge ORR Power check Aircraft Preflight	Safety Brief Shakedown Flight	8 IceBridge Instruments Suite Assessments Flights	9	10
	MCoRDS & Ku Band Radar Antenna, Gravitometer Inst., LVIS Inst. IceBridge DC-8 Instruments Integration					DC-8 Pack
11	Columbus Day Early AM Departure for Santiago, Chile 11 hr transit time	13 Continue to Punta Arenas, Chile 2.5 hr transit time	14	15 1st Science Flight 11 hr (0800-1900)	16 2nd Science Flight 11 hr (1000-2100)	17
	IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)					
18 3rd Science Flight 11 hr (0800-1900)	19 4th Science Flight 11 hr (1000-2100)	20	21 Down Day	22 5th Science Flight 11 hr (0800-1900)	23	24
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)						
25 6th Science Flight 11 hr (0800-1900)	26 7th Science Flight 11 hr (1000-2100)	27	28 8th Science Flight 11 hr (0800-1900)	29	30	31 Down Day
IceBridge DC-8 deployment to Punta Arenas, Chile			IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)			
1	2 9th Science Flight 11 hr (0800-1900)	3 10th Science Flight 11 hr (1000-2100)	4	5	6 11th Science Flight 11 hr (0800-1900)	7
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)						
8	9 12th Science Flight 11 hr (0800-1900)	10 Down Day	11	12 13th Science Flight 11 hr (0800-1900)	13 14th Science Flight 11 hr (1000-2100)	14
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)				IceBridge DC-8 deployment to Punta Arenas, Chile (single		
15	16	17	18	19	20	21
IceBridge DC-8 deployment to Punta Arenas, Chile (single crew)						
22 DC-8 Pack	23 Departure for Santiago, Chile	24 Transit to LAX/Palmdale	25	26	27	28
29	30	1	2	3	4	5

Logistics Items to Work

- Aircraft Fueling
  - Must tow to terminal building
  - Fueling available 0600 – 1930 daily
    - Minimum of two NASA technicians & 1.5-2.0 hours required
      - If AM fueling then issues with instrument preflight
      - Aircraft returns too late for normal PM fueling
    - Dependent on airline personnel to tow aircraft
    - Dependent on fueling area availability
    - Airline operations will influence our activity
  - Action: contact fueling agent & airlines to determine best windows of opportunity & after hours possibilities

- Flight/ground crew assignments
  - Pilots – assignments in work; may add contract pilot
  - Flight Engineers – assignments in work to include contract FEs
  - Navigators – assignments in work; mix of Air Force & contractor
  - Mission Directors – assignments in work from existing staff
  - Technician staff – assignments in work to include contractor personnel